No. 746,370. PATENTED DEC. 8, 1903.

E. PECKHAM.

TRUCK.

APPLICATION FILED SEPT. 10, 1903.

NO MODEL.

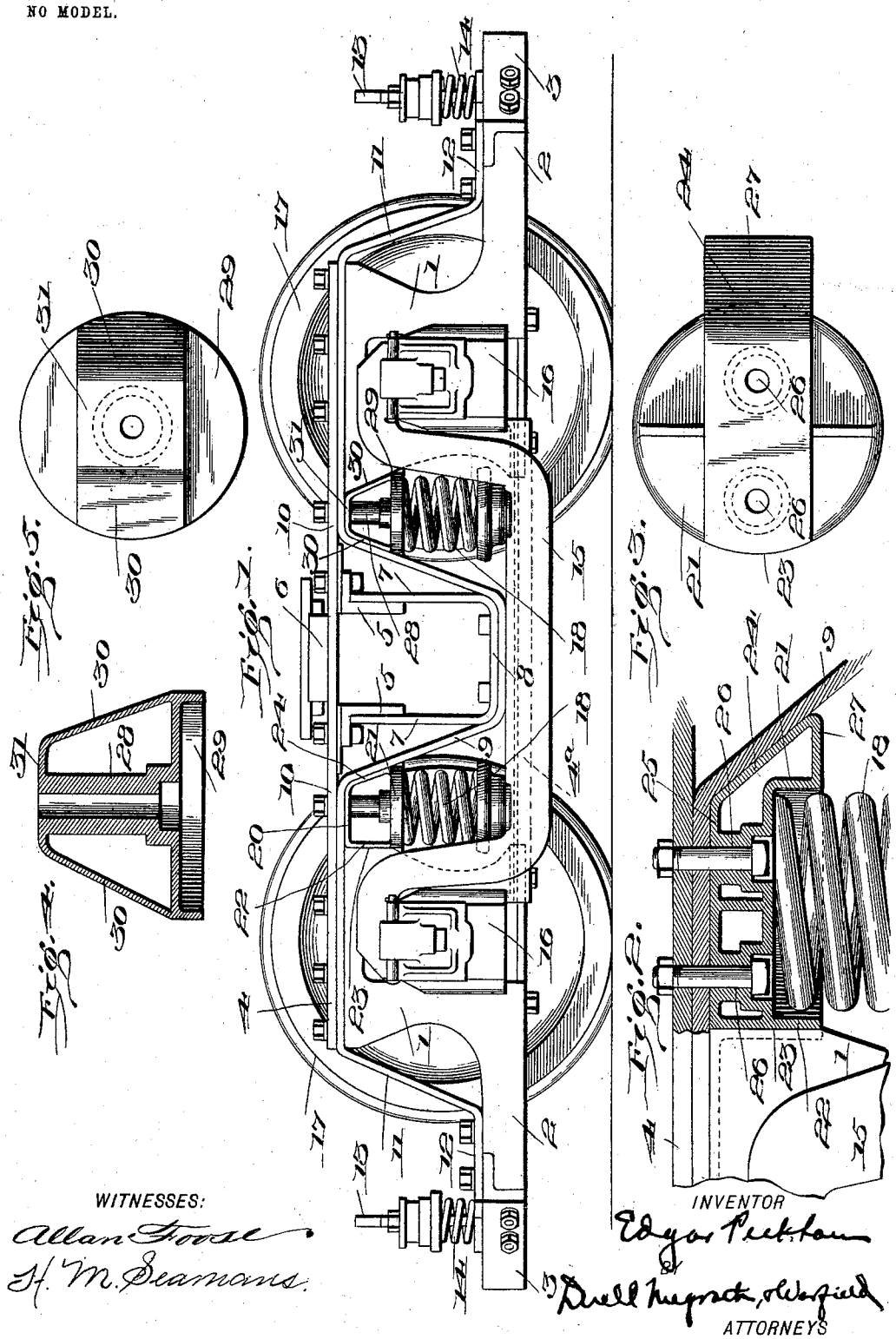


Fig. 1.

Fig. 5.

Fig. 4.

Fig. 3.

Fig. 2.

WITNESSES:

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No. 746,370. Patented December 8, 1903.

UNITED STATES PATENT OFFICE.

EDGAR PECKHAM, OF KINGSTON, NEW YORK.

TRUCK.

SPECIFICATION forming part of Letters Patent No. 746,370, dated December 8, 1903.

Application filed September 10, 1903. Serial No. 172,548. (No model.)

To all whom it may concern:

Be it known that I, EDGAR PECKHAM, residing at Kingston, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Trucks, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to trucks; and its object is to provide a truck of improved construction, such that the strength, efficiency, and durability thereof are increased.

Further objects and advantages will be in part obvious from the following description and in part pointed out.

The invention consists in the features of construction, combinations of elements, and arrangement of parts, which will be hereinafter fully described, and the novel features thereof pointed out in the claims.

In the accompanying drawings, which illustrate the invention in certain of its embodiments, Figure 1 is a side elevation of a truck constructed in accordance with my invention, but showing a slightly-different form of spring-cap for the equalizer-springs at the two ends thereof. Fig. 2 is a sectional detail, on an enlarged scale, illustrating the construction and relation to the other parts of a spring-cap similar to that shown at the left of Fig. 1. Fig. 3 is a top plan view of the spring-cap shown in Fig. 2, with the other parts omitted. Fig. 4 is a sectional detail, on an enlarged scale, of the spring-cap shown at the right of Fig. 1. Fig. 5 is a top plan view of the same.

Similar reference characters refer to similar parts throughout the several views.

Referring first to Fig. 1, it will be understood that while only one side of the truck-frame is shown therein the parts at the other side are duplicates, and illustration thereof is unnecessary for the full understanding of the present invention. The truck side frame comprises pedestals 1 1, having end projections 2 2 extending, preferably, from the lower outer corners thereof, to which end projections are adapted to be bolted or otherwise secured the end bars 3 3. Upper and lower side bars or beams 4 and 4^a connect the pedestals, the upper side bars being connected by transoms 5, between which may be mounted a bolster 6 of the usual construction. The upright members 7 7 of a U-shaped stirrup are bolted to the sides of the transoms, and the lower cross member thereof, as at 8, is bolted to the central part of a truss or brace rod 9 and to the lower side bar 4^a. The parts thus far described are of usual construction.

A feature of invention resides in the construction according to which the truss-rod extending across the side frame to stiffen said frame, as disclosed in Patent No. 681,342, issued to me for car-truck on August 27, 1901, is further extended beyond the pedestals and connected to stiffen and brace the end projections. This truss-rod extends upwardly at each side of the U-shaped stirrup to points where it is bolted to the top frame, as at 10, whence it extends between the pedestals 1 and top bar 5, being suitably bolted or otherwise secured thereto, and outside the pedestals it is bent downwardly, as at 11, and bolted or otherwise secured to the end projections 2, as at 12. The parts marked 11 thus act as braces or trusses for the end projections 2, thereby stiffening said end projections and increasing the rigidity of the frame, this being especially desirable when, as shown in the drawings, it is desired to mount the motors outside the wheel-base, motor-supporting bars 13, supported at their ends upon springs 14, suitably mounted on the frame, being indicated for that purpose. For convenience in constructing and assembling, as well as for greater strength, it is preferred that these truss-rods should be integral between the points, as at 12, where they are bolted to the end projections; but they can be made in one or more sections, if desired.

The weight of the car-body, which is transferred from the bolster to the side frame, is transferred from the side frame to the equalizer-bars 15, axle-boxes 16, and wheels 17 through the medium of equalizer-springs 18. The arrangement of these equalizer-springs and of the caps interposed between said springs and the frame forms an important part of my invention, as will now be apparent. In prior constructions wherein the load has been transferred from top bars to equalizer-bars through the medium of similar equalizer-springs the upper ends of the equalizer-springs have been

provided with caps which were connected to the top bars by bolts, and this bolt provided the only bearing between said caps and the frame. Thus the strain at such point was taken entirely upon the connecting-bolt and shearing of the bolt often resulted. The present invention proposes to provide bearings for the sides of the equalizer-spring cap against the pedestals 1 and the truss-rods 9, (one or both,) thereby distributing the strain at these points. To this end in the construction shown at the right of Fig. 1 a spring-cap 20 is provided, which comprises a socket or cap proper, as at 21, adapted to provide a seat for the upper end of the spring 18 and a frame or side members of a construction such that one side member, as at 22, is adapted to fit against the sides of the pedestal, as at 23, and take a bearing thereagainst, preferably filling the space between the socket 21 and the lower side of the truss-rod. The other face or side of the cap, as at 24, is shaped to fit against the side of the diagonal part of the truss-rod 9 and take a bearing thereagainst.. Thus it will be seen that the load carried by the top bar of the frame is transmitted to the equalizer-spring through a spring-cap which is secured to the top bar and which is of such a construction that transverse or angular strains or jolts applied thereto will be in part carried at the point of attachment to the top frame and will be in part transmitted to the other members of the frame, as the pedestal and the truss-rod. The advantages of such a construction will be obvious to those acquainted with this art and need not be further elaborated.

The construction of the spring-cap shown in Fig. 2 is similar to that shown in Fig. 1, except that the relative width of the cap 25 is greater, as it might be in trucks of a longer wheel-base, and bolt-holes are provided therein, as at 26 26, such that two bolts can be used in securing the cap to the top bar, as shown most clearly in the plan view of Fig. 3. The cap, which is preferably of web formation in order that there may be combined lightness with the necessary strength, is substantially circular in form save for an extension 27 of a shape to fit the lower side of the diagonal truss-rod and to provide for the bearing of the spring-cap thereagainst when it is desired that the spring-cap should have a bearing both against the face of the pedestal and the face of the truss-rod.

The views shown in Figs. 4 and 5 correspond to the spring-cap in the assembled construction at the right of Fig. 1. Here the cap is of a webbed construction, having a central post 28, bored for the passage of a connecting-bolt, a lower socket or cap proper, 29, and side webs or members 30, connecting said socket to the top member 31, the top and side members being adapted to fill the space between the pedestal and the truss-rod and to fit closely therein.

The fact which is especially applicable to inventions of this character will be apparent to those skilled in this art that various changes in detail, both in the construction of elements and in the assembling of elements, may be made in carrying out this invention, which changes might materially alter the appearance of the assembled structure from that shown in the present drawings without involving any changes in principle or departing from the scope of this invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a truck, in combination with the side frame provided with pedestals and a top bar, a spring included in the support of said top bar, and a spring-cap adapted to be connected to said top bar and provided with a seat or socket for the upper end of said supporting-spring, said cap being constructed to bear against the face of the adjacent pedestal.

2. In a truck, in combination with the side frames provided with pedestals and top bars and the springs adapted to be supported from the wheels, a spring-cap for each of said springs, said caps being located between the upper ends of the springs and the top bar and secured to the top bar and having bearing-surfaces against the inner faces of the pedestals.

3. In a truck, in combination with the side frames comprising pedestals and top bars and the springs adapted to be supported from the wheels and to support the top bars, the truss-rods extending diagonally across the side frames so as to leave spaces between the pedestals and the adjacent faces of said truss-rods, and spring-caps adapted to be connected to said top bars and provided with seats or sockets for the upper ends of said springs, said caps being adapted to fill the space between the pedestals and the truss-rods.

4. In a truck, in combination with the side frames comprising upper and lower side bars and pedestals, a truss-rod extending diagonally across said side frames so as to connect the lower side bars to the upper side bars at points adjacent each of the pedestals but removed therefrom, springs adapted to be supported from the wheels and to support said top bars, and spring-caps provided with seats for the upper ends of said springs and bolted to said top bars, said caps being provided with parts adapted to take a bearing against the adjacent faces of said truss-rods.

5. In a truck, in combination with the side frames comprising upper and lower side bars and pedestals, a truss-rod extending diagonally across said side frames so as to connect the lower side bars to the upper side bars at points adjacent each of the pedestals but removed therefrom, springs adapted to be supported from the wheels and to support said top bars, and spring-caps provided with seats for the upper ends of said springs and bolted to said top bars, said caps being provided with parts adapted to take a bearing against

the adjacent faces both of said truss-rods and of the pedestals.

6. In a truck, in combination with the side frames provided with top bars, pedestals and end projections, truss-rods adapted to brace the center of said side frames and extending between the top bars and the pedestals and to a point where they are secured to the end projections at each end of the truck, substantially as described and for the purposes set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

EDGAR PECKHAM.

Witnesses:
GEO. BOWERS,
HARRY BRADY.